

Cultural Resource Hazard Mitigation Plan

Weather It Together: The Annapolis Model

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Annapolis

A Legacy of Resource Protection



Annapolis, a city with exceptional attributes for a great future, needs only a population and city administration willing to use these attributes wisely, preserving and protecting the beauty of its natural setting, the splendor of its four centuries of architecture and history of exceptional significance.



Anne St. Clair Wright, 1992

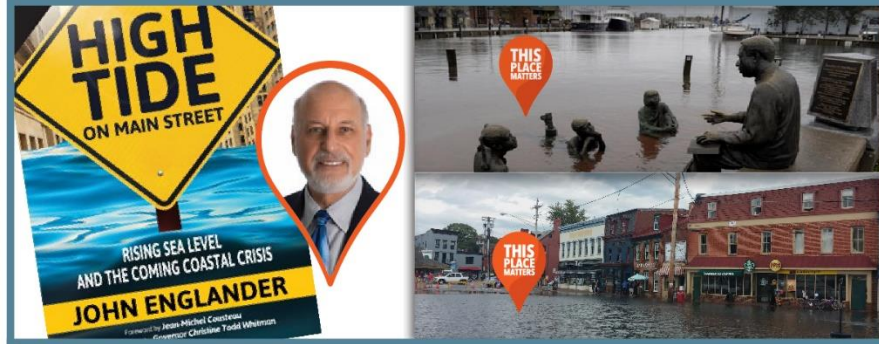


The Brand

Annapolis - A Model for Community Engagement

“What is most compelling about the Annapolis model for public engagement piece is that it's always considered and included as they move through the different stages of plan development -- that's really the takeaway here: that the City has managed to create and implement a meaningful, successful public engagement process.”

Jen Sparenberg
Resilience Manager
Maryland Historical Trust – MD Dept. of Planning



Jan. 30th

Francis Scott Key Auditorium
St. John's College

Free!

ANNAPOLIS PREPARES FOR RISING SEAS - HISTORY MEETS THE FUTURE

Event Sponsored by:



&



Mayor Michael Pantelides invites you to a free public lecture by John Englander, noted oceanographer, author and President of the International Sea Level Institute to hear how the global impacts of sea level rise will impact Annapolis and the greater Chesapeake region. Mr. Englander will discuss why Annapolis is leading the way in planning for the protection of cultural assets and working with state and federal partners to Weather It Together.

Saturday, January 30, 2016
Francis Scott Key Auditorium, St. John's College
60 College Avenue, Annapolis, Maryland

4 pm Lecture

5 pm Reception and Book Signing

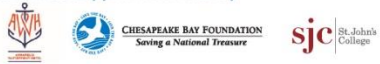
FREE and OPEN to the Public!!

Please RSVP to hispres@annapolis.gov or
call Shari Phippen at 410/263-7961

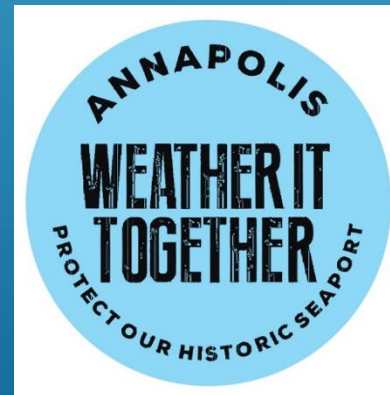
Thank You to Our Supporting Partners



Additional Support Provided by



John Englander is the first in a series of lectures scheduled for 2016 in celebration of Preservation50 - the official event recognizing the 50th Anniversary of the passage of the National Historic Preservation Act of 1966, and the reason we have a federal-certified historic preservation program in Annapolis.



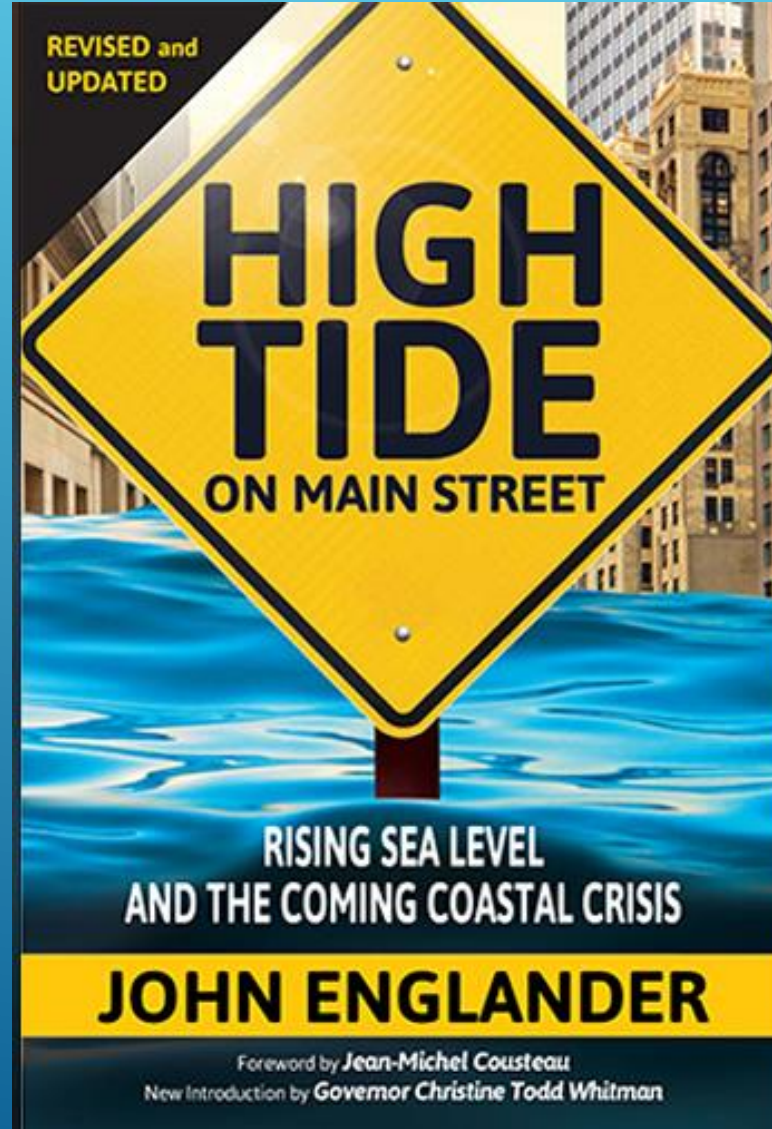
Communicating Risk

Policy and Politics of Sea Level Rise

ForumJournal

SUMMER 2015 | VOL. 29 NO. 4

High Water and High
Stakes: Cultural Resources
and Climate Change



Ice melts at 32 degrees. It doesn't care if you are a Republican or a Democrat.

- John Englander,
oceanographer and author of
High Tide on Main Street



Communicating Risk

UCS - National Landmarks at Risk

National Landmarks at Risk

*How Rising Seas, Floods, and Wildfires Are Threatening
the United States' Most Cherished Historic Sites*



Union of
Concerned Scientists



Since 2001, water has reached flood levels an average of 20 days or more a year in Annapolis, Maryland; Wilmington, North Carolina; Washington, D.C.; Atlantic City, New Jersey; Sandy Hook, New Jersey; and Charleston, South Carolina.



Communicating Risk

UCS - Encroaching Tides

Encroaching Tides

How Sea Level Rise and Tidal Flooding Threaten U.S. East and Gulf Coast Communities over the Next 30 Years



Annapolis experienced the greatest increase in nuisance flooding during the last 50 years - 925% - from an average of 3.8 to 39.3 per year. In the next 50 years, nuisance flooding is estimated to occur more than once a day. (Source: NOAA)



Communicating Risk

Lost Landmarks of the Chesapeake



*U. S. Coast Survey
A. D. Bach, Superintendent*

SHARP'S ISLAND.

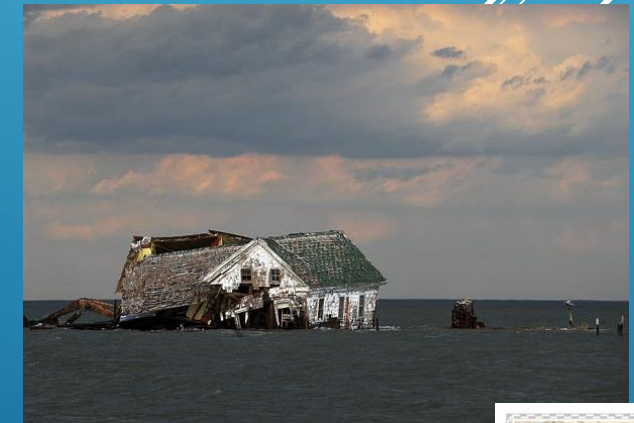
Surveyed 20th and 21st of May, 1848.

Topography by Soundings

Scale 1/4 mile

Maryland

*Register No. 951.
Area here 1/4 mile.*



**Holland, Hooper's and Sharp
Islands - Last structures lost (2010)**



Resiliency Planning: The City

2011 Annapolis Sea Level Rise Studies & Mitigation Strategies

FLOOD MITIGATION STRATEGIES FOR THE CITY OF ANNAPOLIS, MD: CITY DOCK AND EASTPORT AREA



Prepared for

City of Annapolis
Department of Neighborhood and Environmental Programs

Prepared by:

Whitney, Bailey, Cox & Magnani, LLC
849 Fairmount Ave
Baltimore, Maryland 21226

March 2011

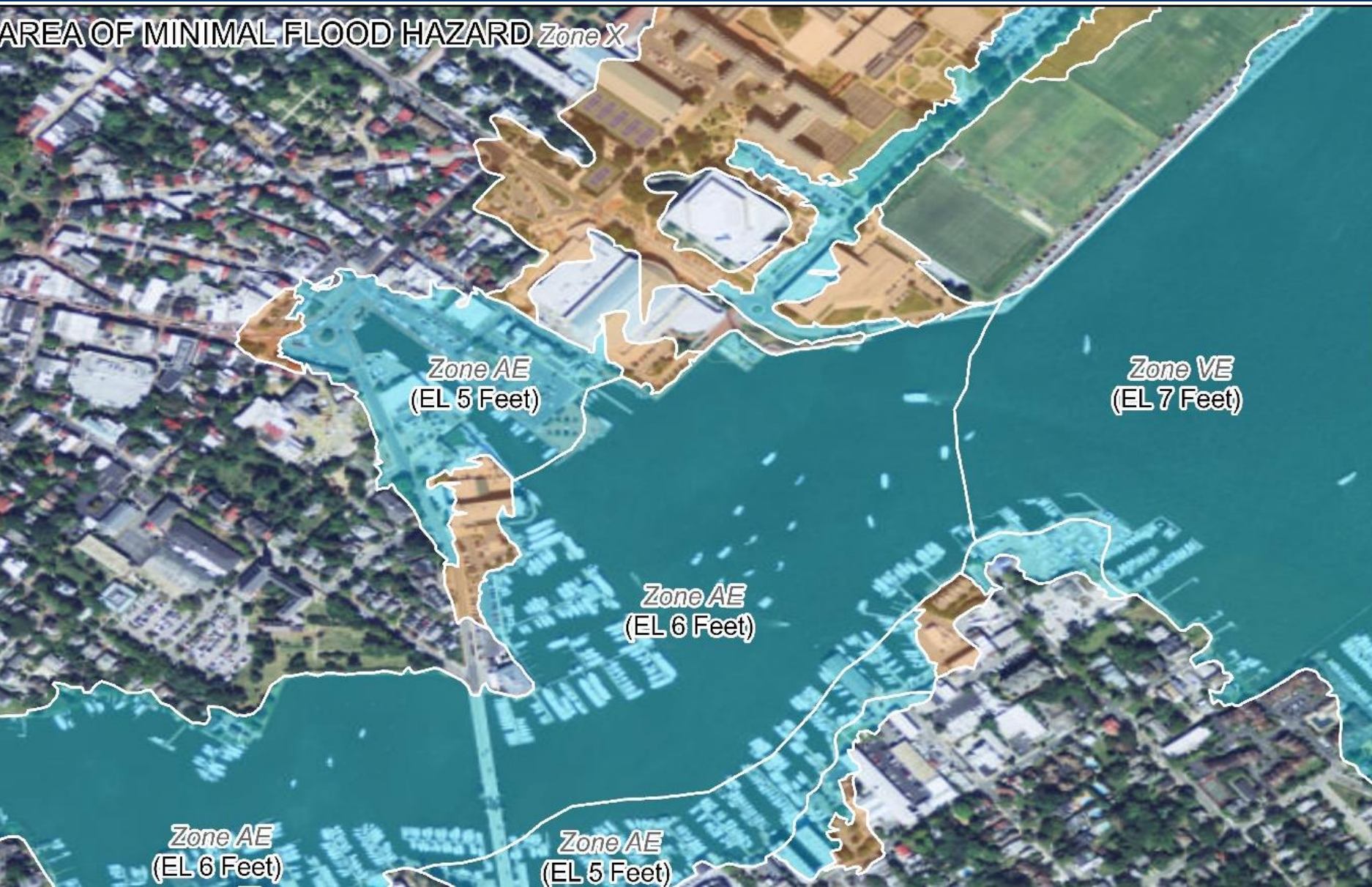


- Focus on protecting existing structures
- Study downtown to determine costs & benefits of public decision-making in mitigating property damage
- Evaluate the need and options for protecting historic structures
- Require floodproofing to the extent feasible



Mapping Annapolis: 2016

FEMA Flood Insurance Rate Map (FIRM)



- Blue shading 1% annual chance (100-year) flood
- Orange shading is 0.2% annual chance (500-yr) flood

Mapping Annapolis: 2100

FEMA FIRM



- Flood elevation 8.2 ft.
- 1% annual chance flood (4.5') plus 3.7 feet for sea level rise by the year 2100

Remembering Isabel

September 19, 2003



Historic Landmark District



Eastport



Naval Academy



Cultural Resource Adaptation: Annapolis

FEMA Hazard Mitigation Planning



Integrating Historic Property and Cultural Resource Considerations Into Hazard Mitigation Planning

State and Local Mitigation Planning How-To Guide

FEMA 386-6 / May 2005



Hazard mitigation planning is the process of determining how to reduce or eliminate the loss of life and property damage resulting from natural and manmade hazards.

- 1. Organize Resources** to develop a mitigation plan;
- 2. Identify hazards** and **Assess Losses** to your community;
- 3. Set Priorities** and goals for mitigation / adaptation and **Write the Plan**;
- 4. Implement** the plan, including project funding.



Weather It Together: Protecting Our Historic Seaport

Organize Resources - Stakeholders

STAKEHOLDERS (Partial List)

City of Annapolis ▪ Chesapeake Bay Foundation
Downtown Annapolis Partnership ▪ Historic
Annapolis ▪ FEMA ▪ Four Rivers Heritage Area
MD Emergency Management Agency ▪ MD Dept.
of Natural Resources ▪ MD Dept. of the Environment
Maryland Historical Trust ▪ National League of
Cities ▪ NOAA ▪ National Park Service ▪ National
Trust for Historic Preservation ▪ Newport Restoration
Foundation ▪ Preservation Maryland ▪ ServPro ▪
Union of Concerned Scientists
United States Naval Academy ▪ United States Army
Corps of Engineers ▪ US ICOMOS ▪ Urban Land
Institute ▪ VA Dept. of Historic Resources

Develop a “Core Team”

- Gov't Agencies
- Preservation / Heritage Org.
- Cultural Institutions
- Business Associations - Main Street, Chamber, etc.
- Resident Associations
- Heritage Area
- Tourism / Hospitality
- Environmental
- Maritime
- Architecture / Engineering
- Archaeology
- Media
- Education



Weather It Together: Stakeholders

Organize Resources: Survey



PERSONNEL

City of Annapolis

- Historic Preservation Div.
 - Contract Historians/Architect
- Information Technology - GIS

US Army Corps of Engineers

- CRM Staff

FUNDING

Maryland Historical Trust

Preservation Maryland

PUBLIC ENGAGEMENT

Letters to Property Owners

Core Team Monthly Mtg.

Presentations

- Historic Preservation Commission
- Rotary
- Main Street
- Resident Association



Weather It Together

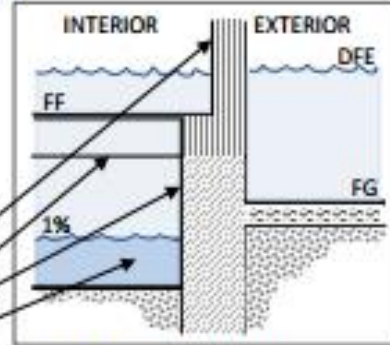
Identify Hazards & Assess Losses

ANNAPOLIS, MARYLAND • HISTORIC DISTRICT – NONSTRUCTURAL ASSESSMENT SAMPLING

4.0 STRUCTURE DATA/ASSESSMENT SHEETS STRUCTURE #1 - 130 PRINCE GEORGE STREET

Structure Information / Data

Name/Description: Sands' House
 Location: 130 Prince George Street
 Occupancy type: Single-Family Dwelling (Residential)
 No of Stories: 2 ½
 Building Construction:
 Exterior Walls: Wood frame.....
 Floor Construction (1st Flr): Wood Frame.....
 Foundation Wall: Masonry w/crawlspace (+/- 4.33 ft.).
 Grade/Crawlspace/Basement: Crawlspace.....



BUILDING SECTION (at Grade)
Not to Scale

Structure/Flood Elevations Table

FG	LO	FF	Δ FF-FG	1%	DFE	Δ 1%-FF	Δ DFE-FF	Δ 1%-FG	Δ DFE-FG
5.54'	*6.62'	7.29'	1.5'	4.50'	8.20'	-2.79'	0.91'	-1.04'	2.66'

Abbreviations: FG – Finish Grade [low point]; LO – Low Opening; FF – First Floor; 1% – One Percent Exceedance Flood [100 yr]; DFE – Design Flood Elevation; Δ-Delta/Difference

*See Site Visit and Analysis sections.

Structure Photographs



South Elevation (Front)



Front Entrance



Crawl Space

PERSONNEL

City of Annapolis

- Historic Preservation Div.
 - Contract Architect
- Information Technology - GIS

US Army Corps of Engineers

- Flood Management Staff

FUNDING

National Trust for Historic Preservation

MD Dept. of Natural Resources / NOAA

PUBLIC ENGAGEMENT

Core Team Monthly Mtg.

Town Hall

Presentations

- Historic Preservation Commission
- City Council
- Main Street & Chamber of Commerce
- Resident Association
- MD Climate Change Work Group



Weather It Together

Set Priorities: Community Value

B	C	D	E	F	G
	SDAT Tax ID Number	HAZARD: Coastal Name and Address of Asset Subject to Hazard (same as previous Page)	MHT Inventory Number (AA#)	Date of Construct ion	Type of Property Type of Resource
	06 000 00030807	1 Southgate Avenue	1450	1910 - 1915	Detached House
	06 000 05035575	12 Fleet Street	1267	1875	Attached House / Duplex
	06 000 00143206	9 Pinkney Street	1241	1880	Attached House / Rowhouse
	06 000 03587510	18 Pinkney Street / Shiplap House	643	1713 / 1723	Detached House / Historic
	06 000 02047510	130 Prince George Street / Sands House	652	1739 / 1765	Detached House

PERSONNEL

City of Annapolis

- Historic Preservation Div.
- Contract WIT Team
- Planner, Architect, Community Relations, Engineer

•Information Technology – GIS

•Office of Emergency Mgmt.

•Dept. of Public Works

US Army Corps of Engineers

Historic Annapolis

Maryland Historical Trust

FUNDING

National Trust for Historic Preservation

MD Dept. of Natural Resources/NOAA

PUBLIC ENGAGEMENT

Core Team Monthly Mtg.

What's Your View Workshops



Weather It Together

Engage the Public



Monthly Core Team meeting

- Topic-based speakers
- Planning updates
- Goal setting
- Focus groups

Online Survey

Trade Show Exhibit

Town Hall / Open House

Lectures / Workshops

Editorial Board / Media

Student Contests / Activities

Social Media / Website

Tours

Charrette

Conference - KHAW



Weather It Together

Stakeholders = Funders



In the past 3 years, Annapolis has leveraged \$106,500 in City funds to secure private & public funds and in-kind support totaling \$1,536,500. This support funded:

- Education & public outreach (branding, visual preference survey, town hall, guest lectures, design charrette & social media)
- Historic survey / vulnerability assessment
- Elevation surveys & model mitigation strategies
- GIS subscription & training
- Cultural resource hazard mitigation plan
- *Keeping History Above Water* Conference
- FEMA Workshops
- Design for Stormwater / Floodplain Management



Weather It Together

Identify Adaptation Alternatives



- Land Use Planning
- Economic Development
- Building Codes & Zoning Regulations
- Cultural Resource Protection
- Natural Resource Protection
- Private Property Improvements
- Public Infrastructure Improvements
- Public Awareness
- Economic Incentives



Weather It Together

Write the Plan



PERSONNEL

City of Annapolis

- Historic Preservation Div.
 - Contract WIT Team - Planner, Architect, Community Relations, Engineer
- Information Technology – GIS
- Office of Emergency Mgmt.
- Dept. of Public Works

FUNDING

MEMA / FEMA

US Army Corps of Engineers

- Flood Mitigation Staff – Cost Estimating

PUBLIC ENGAGEMENT

Online Survey

Open House & Forum

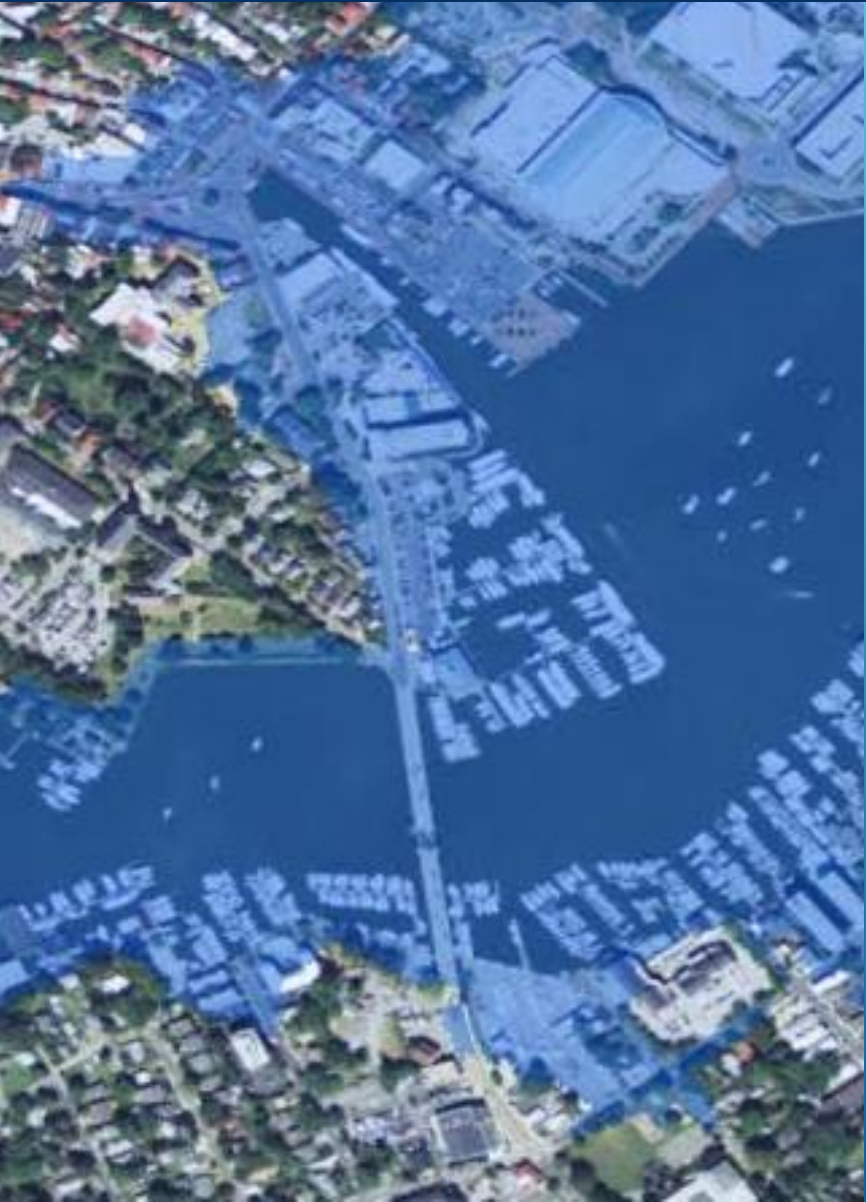
Keeping History Above Water Conference



Weather It Together

What is Our Vision?

The City of Annapolis will survive and thrive by building resilience and adapting to rising sea level and natural hazards that threaten our Capital City's cultural and natural heritage.



Weather It Together

What are Our Goals?



Protect Annapolis' historic character and economic vitality from flooding hazards by minimizing loss to structures, cost to stakeholders and impact on our economy.



Weather It Together

What Actions Will We Take?



- Build public awareness and engagement
- Align land use, economic development, environmental and regulatory activities to protect the City's cultural, economic, and natural assets
- Develop a disaster response & recovery plan to *Build Back Better*
- Lead resilience efforts in flood adaptation and mitigation
- Finance public improvements and incentivize private investment for flooding adaptation



Weather It Together: Action

Build public awareness and engagement



- Develop and implement a public engagement and education program for Annapolis residents and business owners.
- Share best practices in adaption planning and implementation with other historic communities.
- Develop and conduct annual City staff training on flooding, risk reduction and disaster response



KEEPING HISTORY ABOVE WATER



WHAT PLACES MATTER MOST TO YOU?

Annapolis.gov/WeatherItTogether

Contact: lmcraig@Annapolis.gov

Date: Oct. 29 – Nov. 1, 2017

Location: Annapolis Waterfront Hotel

Pre-Register: HistoryAboveWater.org



KEEPING HISTORY ABOVE WATER



Originally convened by the Newport Restoration Foundation in April 2016, *Keeping History Above Water* was one of the first national conversations to focus on the increasing and varied risks posed by sea level rise to historic coastal communities and their built environments.



KEEPING HISTORY ABOVE WATER



Keeping History Above Water engages specialists from across the United States and the world to share experiences, examine risks, and discuss solutions with an emphasis on case studies and real world applications.



KEEPING HISTORY ABOVE WATER

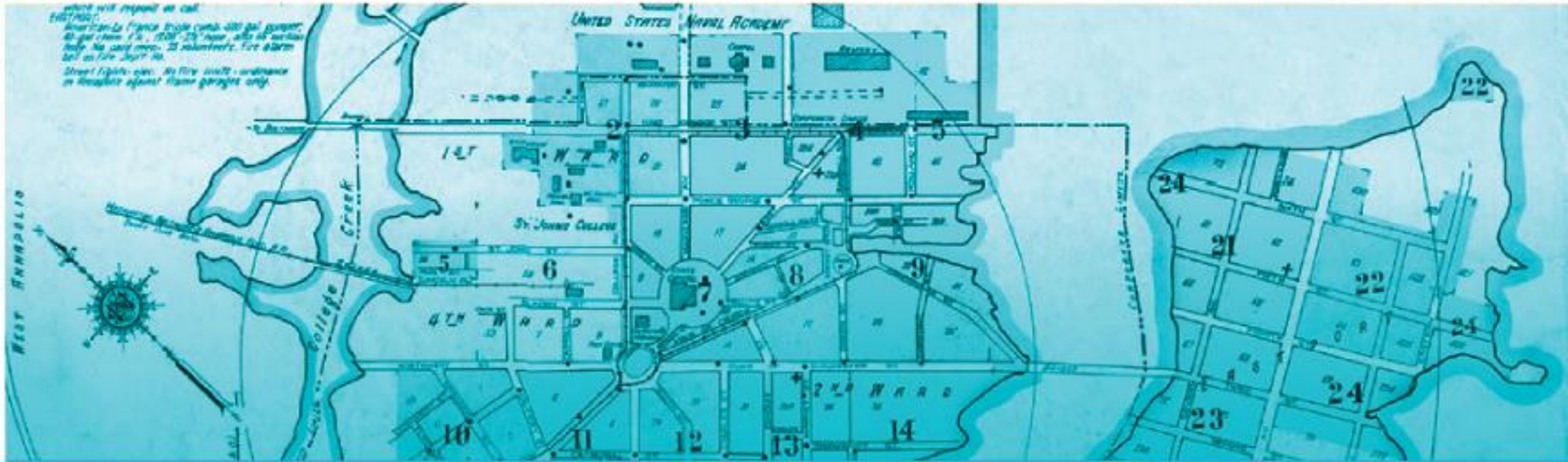


Keeping History Above Water: Annapolis will bring together hundreds of regional, national and international experts on issues ranging from environmental/earth science to preservation practices, from adaption for national security to disaster preparedness for flooding hazards.



CALL FOR PRESENTERS

KEEPING HISTORY ABOVE WATER ANNAPOLIS: ALTERNATIVES FOR COASTAL COMMUNITIES



OCTOBER 29 - NOVEMBER 1, 2017 | www.historyabovewater.org/2017-conference

Pre-register for early bird rates. For more information:
Lisa Craig – histpres@Annapolis.gov

